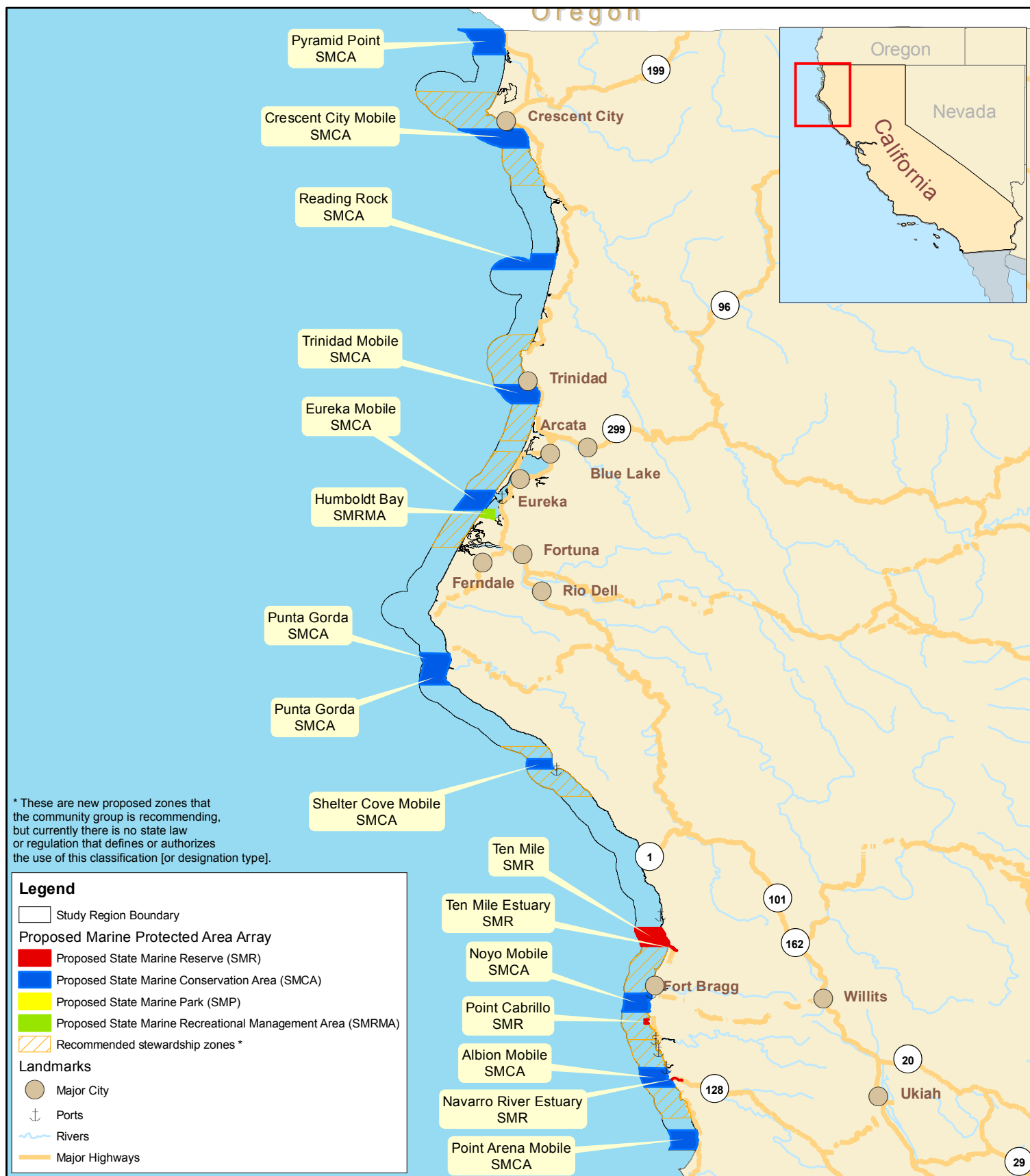


## **Marine Life Protection Act Initiative**

### **Overview Maps and Staff Summaries for External Arrays A-H and MPA Proposal 0 (existing MPAs)**

# MLPA North Coast Study Region

## Round 1- North Coast External Proposed MPA Array A



### California Marine Life Protection Act (MLPA) Initiative

#### Projection Information:

Name: NAD 1983 California Teale Albers  
 Projection: Albers  
 Datum: North American 1983

Printing Date: February 16, 2010

Created by Marine Map Cartographic Division, UCSB.

For more information, visit <http://www.northcoast.marinemap.org/marinemap/>

**California Marine Life Protection Act Initiative**  
**MLPA North Coast Study Region: Round 1 Evaluations**  
**Staff Summary of Area and Habitats in External Proposed MPA Array A**  
*Date Revised: March 9, 2010*

**Table 1. Summary of MPAs by Designation for External Proposed MPA Array A**

Type of MPA <sup>a</sup>	# of MPAs	Area (mi <sup>2</sup> )	% of Study Region
State Marine Reserve (SMR)	4	14.43	1.4%
State Marine Recreational Managed Area (SMRMA)	1	2.44	0.2%
State Marine Park (SMP)	0	0.00	0.0%
State Marine Conservation Area (SMCA)	10	161.50	15.7%
<b>All MPAs combined</b>	<b>15</b>	<b>178.37</b>	<b>17.4%</b>

<sup>a</sup> These are proposed marine protected area (MPA) designations, NOT levels of protection assigned by the MLPA Master Plan Science Advisory Team (SAT). SMRMA is not an MPA designation, but rather a marine managed area designation.

**Table 2. Summary of MPAs by Level of Protection for External Proposed MPA Array A**

Level of Protection (LOP)	# Proposed	Area (mi <sup>2</sup> )	% of Study Region
Very High <sup>b</sup>	5	16.87	1.6%
High	0	0.00	0.0%
Moderate-High	2	32.84	3.2%
Moderate	0	0.00	0.0%
Low <sup>c</sup>	8	128.65	12.5%
<b>Total</b>	<b>15</b>	<b>178.37</b>	<b>17.4%</b>

<sup>b</sup> The "Very High" category includes MPAs with SMR designation, as well as SMRMA designations.

<sup>c</sup> The "Low" category groups together MPAs that are assigned a moderate-low and low level of protection.

**Table 3. Individual MPAs in External Proposed MPA Array A<sup>d</sup>**

MPA Name	Size <sup>e</sup> (mi <sup>2</sup> )	Alongshore Span <sup>f</sup> (mi)	Depth Range <sup>g</sup> (ft)
Pyramid Point (FS) SMCA <sup>h</sup>	21.30	4.7	0 - 124
Crescent City Mobile SMCA <sup>h</sup>	22.27	4.4	0 - 245
Reading Rock (FS) SMCA	19.03	2.8	0 - 244
Trinidad Mobile SMCA <sup>h</sup>	17.69	3.7	0 - 172
Eureka Mobile SMCA <sup>h</sup>	13.81	3.7	0 - 143
Humboldt Bay SMRMA <sup>h</sup>	2.44	N/A	Depth data not available
Punta Gorda (FS) SMCA	21.46	5.7	0 - 1598
Shelter Cove Mobile SMCA <sup>h</sup>	6.21	1.8	0 - 823
Ten Mile (FS) SMR <sup>h</sup>	13.77	3.6	0 - 343
Ten Mile Estuary SMR	0.19	N/A	Depth data not available
Noyo Mobile SMCA <sup>h</sup>	12.85	3.4	0 - 346
Point Cabrillo (FS) SMR	0.37	0.8	0 - 40
Albion Mobile SMCA <sup>h</sup>	13.85	3.6	0 - 368
Navarro River Estuary SMR <sup>h</sup>	0.09	N/A	Depth data not available
Point Arena Mobile SMCA <sup>h</sup>	13.03	3.4	0 - 240

<sup>d</sup> This array proposes a new concept where mobile MPAs would rotate within a given area, referred to as a “stewardship zone.” Please see External MPA Array A’s supporting materials for a list of those stewardship zones.

<sup>e</sup> Statue mile is the unit of measurement used for this analysis.

<sup>f</sup> Alongshore span measured as direct line from one end of the MPA to the other, roughly paralleling the coastline. An alongshore span is not calculated for estuarine MPAs

<sup>g</sup> Comprehensive bathymetric data for all estuaries is not available. Though bathymetric data do exist in portions of some estuaries, depth ranges are not provided for estuarine MPAs for consistency in evaluations.

<sup>h</sup> Tribal uses are proposed in this MPA. However, pending further policy guidance, these uses are not currently considered in assigning the level of protection for this MPA.

**Table 4. Habitat Representation in External Proposed MPA Array A**

Habitat <sup>i</sup>	SMR		SMRMA		SMP		SMCA		Total MPAs	
	Area	%	Area	%	Area	%	Area	%	Area	%
Intertidal										
Sandy or gravel beach*	1.93	1%	0.00	0%	0.00	0%	22.69	13%	24.62	14%
Rocky shores*	10.70	7%	0.28	<1%	0.00	0%	24.14	15%	35.12	22%
Hardened shores*	0.00	0%	0.00	0%	0.00	0%	1.85	8%	1.85	8%
Coastal marsh*	2.94	3%	2.27	3%	0.00	0%	0.30	<1%	5.52	6%
Coastal marsh	0.06	2%	0.05	1%	0.00	0%	0.01	<1%	0.11	3%
Tidal flats*	0.33	<1%	1.09	2%	0.00	0%	0.00	0%	1.42	2%
Seagrass beds										
Humboldt Eelgrass	0.00	0%	0.92	13%	0.00	0%	0.00	0%	0.92	13%

*California MLPA North Coast Study Region*  
*Staff Summary of Area and Habitats in External Proposed MPA Array A*  
*Date Revised: March 9, 2010*

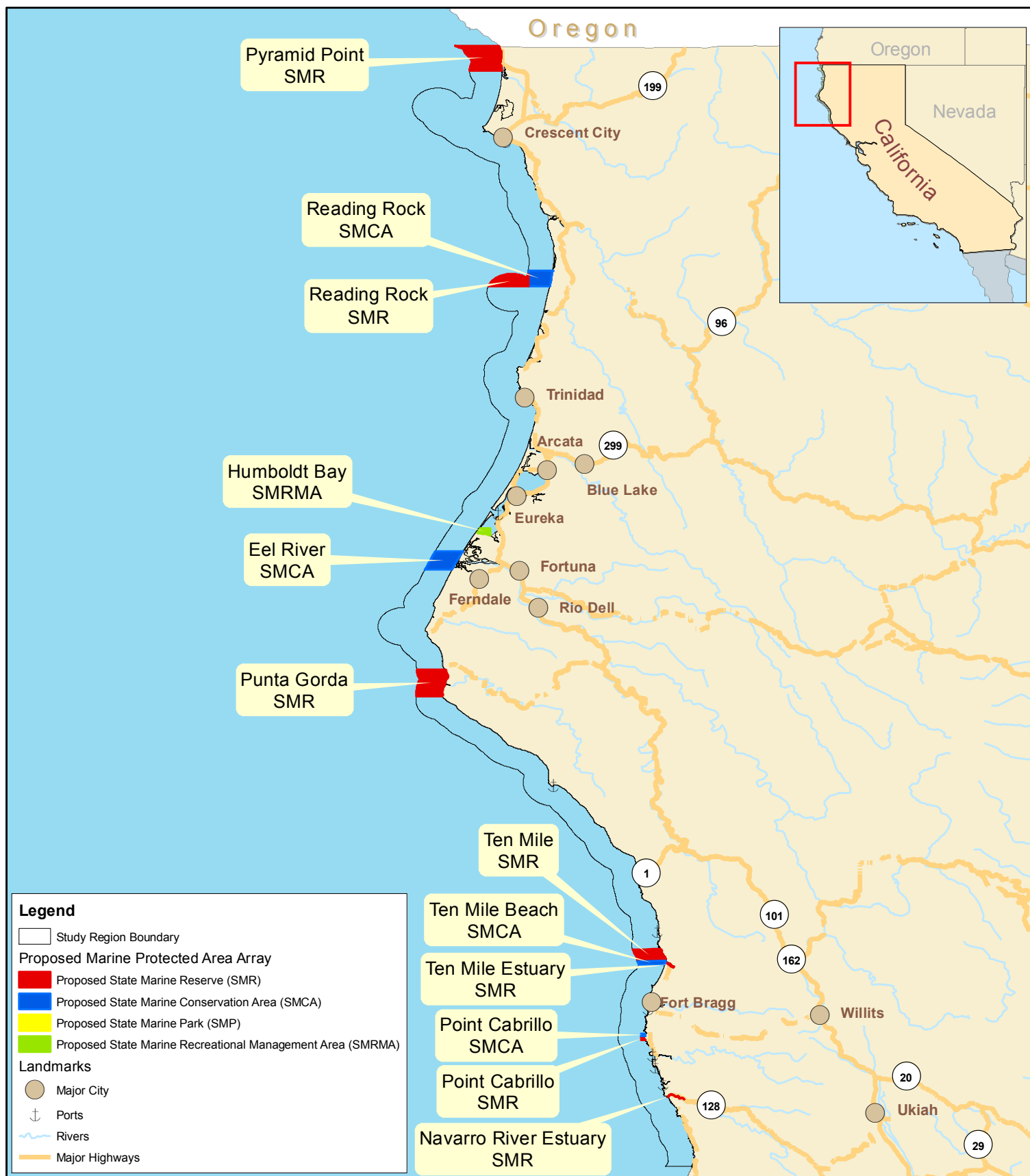
Habitat <sup>i</sup>	SMR		SMRMA		SMP		SMCA		Total MPAs	
	Area	%	Area	%	Area	%	Area	%	Area	%
Estuarine										
Estuary	0.28	1%	2.44	6%	0.00	0%	0.00	0%	2.73	6%
Hard bottom										
0-30 meters proxy <sup>*,j</sup>	1.30	2%	0.00	0%	0.00	0%	10.15	19%	11.45	21%
0-30 meters	0.76	2%	0.00	0%	0.00	0%	6.26	15%	7.02	17%
30-100 meters	0.69	2%	0.00	0%	0.00	0%	6.65	15%	7.35	16%
100-200 meters	0.00	0%	0.00	0%	0.00	0%	0.23	23%	0.23	23%
>200 meters	0.00	0%	0.00	0%	0.00	0%	0.05	52%	0.05	52%
Soft bottom										
0-30 meters proxy <sup>*,j</sup>	2.60	2%	0.00	0%	0.00	0%	24.88	16%	27.48	17%
0-30 meters	1.92	1%	0.00	0%	0.00	0%	47.22	19%	49.14	19%
30-100 meters	9.20	2%	0.00	0%	0.00	0%	62.52	15%	71.72	17%
100-200 meters	0.53	1%	0.00	0%	0.00	0%	9.29	15%	9.82	16%
>200 meters	0.00	0%	0.00	0%	0.00	0%	2.12	28%	2.12	28%
Unknown										
0-30 meters proxy <sup>*,j</sup>	0.00	0%	0.00	0%	0.00	0%	3.47	18%	3.47	18%
0-30 meters	1.32	1%	2.44	1%	0.00	0%	22.19	13%	25.96	16%
30-100 meters	0.00	0%	0.00	0%	0.00	0%	4.96	19%	4.96	19%
100-200 meters	0.00	0%	0.00	0%	0.00	0%	0.00	0%	0.00	0%
>200 meters	0.00	0%	0.00	0%	0.00	0%	0.00	0%	0.00	0%
Other										
Offshore rocks <sup>*</sup>	4.42	3%	0.00	0%	0.00	0%	27.54	20%	31.96	23%
Linear kelp <sup>*</sup>	2.92	6%	0.00	0%	0.00	0%	9.10	17%	12.02	23%

<sup>i</sup> Note: Habitats are measured as an area (mi<sup>2</sup>) except for those with a \* notation. Habitats with a \* notation are expressed in linear units (mi).

<sup>j</sup> There is limited fine scale data for nearshore habitat, shallower than 10-20 meters depth, in the north coast study region. A proxy for this area was created using a line parallel to the coast and classifying the substrate as either hard or soft substrate depending on the dominant habitat type for the 0-30 meter depth zone in that area based on available fine-scale substrate data, shoreline type, kelp abundance, and expert knowledge.

# MLPA North Coast Study Region

## Round 1- North Coast External Proposed MPA Array B



### California Marine Life Protection Act (MLPA) Initiative

#### Projection Information:

Name: NAD 1983 California Teale Albers  
 Projection: Albers  
 Datum: North American 1983

Printing Date: February 16, 2010

Created by Marine Map Cartographic Division, UCSB.

For more information, visit <http://www.northcoast.marinemap.org/marinemap/>

**California Marine Life Protection Act Initiative**  
**MLPA North Coast Study Region: Round 1 Evaluations**  
**Staff Summary of Area and Habitats in External Proposed MPA Array B**  
*Date Created: March 5, 2010*

**Table 1. Summary of MPAs by Designation for External Proposed MPA Array B**

Type of MPA <sup>a</sup>	# of MPAs	Area (mi <sup>2</sup> )	% of Study Region
State Marine Reserve (SMR)	7	60.77	5.9%
State Marine Recreational Managed Area (SMRMA)	1	1.84	0.2%
State Marine Park (SMP)	0	0.00	0.0%
State Marine Conservation Area (SMCA)	4	25.68	2.5%
<b>All MPAs combined</b>	<b>12</b>	<b>88.29</b>	<b>8.6%</b>

<sup>a</sup> These are proposed marine protected area (MPA) designations, NOT levels of protection assigned by the MLPA Master Plan Science Advisory Team (SAT). SMRMA is not an MPA designation, but rather a marine managed area designation.

**Table 2. Summary of MPAs by Level of Protection for External Proposed MPA Array B**

Level of Protection (LOP)	# Proposed	Area (mi <sup>2</sup> )	% of Study Region
Very High <sup>b</sup>	8	62.61	6.1%
High	0	0.00	0.0%
Moderate-High	3	25.39	2.5%
Moderate	0	0.00	0.0%
Low <sup>c</sup>	1	0.29	<0.1%
<b>Total</b>	<b>12</b>	<b>88.29</b>	<b>8.6%</b>

<sup>b</sup> The "Very High" category includes MPAs with SMR designation, as well as SMRMA designations.

<sup>c</sup> The "Low" category groups together MPAs that are assigned a moderate-low and low level of protection.

**Table 3. Individual MPAs in External Proposed MPA Array B**

MPA Name	Size <sup>d</sup> (mi <sup>2</sup> )	Alongshore Span <sup>e</sup> (mi)	Depth Range <sup>f</sup> (ft)
Pyramid Point SMR <sup>g</sup>	21.28	4.7	0 - 124
Reading Rock SMR	10.56	2.3	90 - 245
Reading Rock SMCA <sup>g</sup>	9.52	3.0	0 - 101
Humboldt Bay SMRMA	1.84	N/A	Depth data not available
Eel River SMCA <sup>g</sup>	13.20	3.7	0 - 120
Punta Gorda SMR <sup>g</sup>	19.48	5.0	0 - 1667
Ten Mile SMR <sup>g</sup>	8.81	2.3	0 - 335
Ten Mile Beach SMCA <sup>g</sup>	2.67	0.7	0 - 288
Ten Mile Estuary SMR <sup>g</sup>	0.19	N/A	Depth data not available
Point Cabrillo SMCA <sup>g</sup>	0.29	0.5	0 - 23
Point Cabrillo SMR <sup>g</sup>	0.30	0.7	0 - 40
Navarro River Estuary SMR <sup>g</sup>	0.14	N/A	Depth data not available

<sup>d</sup> Statue mile is the unit of measurement used for this analysis.

<sup>e</sup> Alongshore span measured as direct line from one end of the MPA to the other, roughly paralleling the coastline. An alongshore span is not calculated for estuarine MPAs

<sup>f</sup> Comprehensive bathymetric data for all estuaries is not available. Though bathymetric data do exist in portions of some estuaries, depth ranges are not provided for estuarine MPAs for consistency in evaluations.

<sup>g</sup> Tribal uses are proposed in this MPA. However, pending further policy guidance, these uses are not currently considered in assigning the level of protection for this MPA.

**Table 4. Habitat Representation in External Proposed MPA Array B**

Habitat <sup>h</sup>	SMR		SMRMA		SMP		SMCA		Total MPAs	
	Area	%	Area	%	Area	%	Area	%	Area	%
Intertidal										
Sandy or gravel beach*	9.30	5%	0.00	0%	0.00	0%	7.54	4%	16.84	9%
Rocky shores*	11.03	7%	0.28	<1%	0.00	0%	1.97	1%	13.28	8%
Hardened shores*	0.00	0%	0.00	0%	0.00	0%	0.00	0%	0.00	0%
Coastal marsh*	2.94	3%	1.90	2%	0.00	0%	0.00	0%	4.84	5%
Coastal marsh	0.06	2%	0.04	1%	0.00	0%	0.00	0%	0.10	3%
Tidal flats*	0.36	1%	0.98	1%	0.00	0%	0.00	0%	1.34	2%
Seagrass beds										
Humboldt Eelgrass	0.00	0%	0.57	8%	0.00	0%	0.00	0%	0.57	8%
Estuarine										
Estuary	0.33	1%	1.84	4%	0.00	0%	0.00	0%	2.17	5%
Hard bottom										
0-30 meters proxy* <sup>i</sup>	3.10	6%	0.00	0%	0.00	0%	0.00	0%	3.10	6%
0-30 meters	2.53	6%	0.00	0%	0.00	0%	0.12	<1%	2.65	6%
30-100 meters	1.63	4%	0.00	0%	0.00	0%	0.00	0%	1.63	4%



Habitat <sup>h</sup>	SMR		SMRMA		SMP		SMCA		Total MPAs	
	Area	%	Area	%	Area	%	Area	%	Area	%
100-200 meters	0.23	23%	0.00	0%	0.00	0%	0.00	0%	0.23	23%
>200 meters	0.05	52%	0.00	0%	0.00	0%	0.00	0%	0.05	52%
Soft bottom										
0-30 meters proxy <sup>*,i</sup>	9.48	6%	0.00	0%	0.00	0%	3.72	2%	13.20	8%
0-30 meters	17.82	7%	0.00	0%	0.00	0%	8.47	3%	26.28	10%
30-100 meters	27.10	6%	0.00	0%	0.00	0%	1.97	<1%	29.07	7%
100-200 meters	3.07	5%	0.00	0%	0.00	0%	0.00	0%	3.07	5%
>200 meters	2.40	31%	0.00	0%	0.00	0%	0.00	0%	2.40	31%
Unknown										
0-30 meters proxy <sup>*,i</sup>	0.00	0%	0.00	0%	0.00	0%	3.77	20%	3.77	20%
0-30 meters	5.63	3%	1.84	1%	0.00	0%	14.10	9%	21.56	13%
30-100 meters	0.30	1%	0.00	0%	0.00	0%	1.03	4%	1.33	5%
100-200 meters	0.00	0%	0.00	0%	0.00	0%	0.00	0%	0.00	0%
>200 meters	0.02	10%	0.00	0%	0.00	0%	0.00	0%	0.02	10%
Other										
Offshore rocks*	7.53	5%	0.00	0%	0.00	0%	0.89	1%	8.42	6%
Linear kelp*	2.55	5%	0.00	0%	0.00	0%	0.45	1%	2.99	6%

<sup>h</sup> Note: Habitats are measured as an area (mi<sup>2</sup>) except for those with a \* notation. Habitats with a \* notation are expressed in linear units (mi).

<sup>i</sup> There is limited fine scale data for nearshore habitat, shallower than 10-20 meters depth, in the north coast study region. A proxy for this area was created using a line parallel to the coast and classifying the substrate as either hard or soft substrate depending on the dominant habitat type for the 0-30 meter depth zone in that area based on available fine-scale substrate data, shoreline type, kelp abundance, and expert knowledge.

# MLPA North Coast Study Region

## Round 1- North Coast External Proposed MPA Array C



### California Marine Life Protection Act (MLPA) Initiative

#### Projection Information:

Name: NAD 1983 California Teale Albers  
 Projection: Albers  
 Datum: North American 1983

Printing Date: February 17, 2010

Created by Marine Map Cartographic Division, UCSB.

For more information, visit <http://www.northcoast.marinemap.org/marinemap/>

#### Disclaimer:

This map represents a proposed external marine protected area (MPA) array that has been submitted by a north coast community group or groups for consideration in the MLPA planning process. This external MPA array is under review; it is NOT a recommendation to the California Fish and Game Commission.

**California Marine Life Protection Act Initiative**  
**MLPA North Coast Study Region: Round 1 Evaluations**  
**Staff Summary of Area and Habitats in External Proposed MPA Array C**  
*Date Created: March 5, 2010*

**Table 1. Summary of MPAs by Designation for External Proposed MPA Array C**

Type of MPA <sup>a</sup>	# of MPAs	Area (mi <sup>2</sup> )	% of Study Region
State Marine Reserve (SMR)	0	0.00	0.0%
State Marine Recreational Managed Area (SMRMA)	1	1.84	0.2%
State Marine Park (SMP)	2	0.27	<0.1%
State Marine Conservation Area (SMCA)	14	119.51	11.6%
<b>All MPAs combined</b>	<b>17</b>	<b>121.62</b>	<b>11.8%</b>

<sup>a</sup> These are proposed marine protected area (MPA) designations, NOT levels of protection assigned by the MLPA Master Plan Science Advisory Team (SAT). SMRMA is not an MPA designation, but rather a marine managed area designation.

**Table 2. Summary of MPAs by Level of Protection for External Proposed MPA Array C**

Level of Protection (LOP)	# Proposed	Area (mi <sup>2</sup> )	% of Study Region
Very High <sup>b</sup>	1	1.84	0.2%
High	9	86.64	8.4%
Moderate-High	3	27.64	2.7%
Moderate	0	0.00	0.0%
Low <sup>c</sup>	4	5.51	0.5%
<b>Total</b>	<b>17</b>	<b>121.62</b>	<b>11.8%</b>

<sup>b</sup> The "Very High" category includes MPAs with SMR designation, as well as SMRMA designations.

<sup>c</sup> The "Low" category groups together MPAs that are assigned a moderate-low and low level of protection.

**Table 3. Individual MPAs in External Proposed MPA Array C**

MPA Name	Size <sup>d</sup> (mi <sup>2</sup> )	Alongshore Span <sup>e</sup> (mi)	Depth Range <sup>f</sup> (ft)
Pyramid Point SMCA <sup>g</sup>	21.26	4.7	0 - 124
False Klamath Cove SMCA <sup>g</sup>	9.01	2.0	0 - 121
Reading Rock SMCA <sup>g</sup>	19.57	6.3	96 - 253
Reading Rock Coastline SMCA <sup>g</sup>	11.56	3.5	0 - 105
Humboldt Bay SMRMA <sup>g</sup>	1.84	N/A	Depth data not available
Punta Gorda SMCA <sup>g</sup>	21.09	5.3	0 - 1667
Vizcaino Outside SMCA <sup>g</sup>	7.07	3.4	150 - 394
Vizcaino SMCA <sup>g</sup>	5.95	3.4	0 - 254
Ten Mile SMCA <sup>g</sup>	13.97	3.6	0 - 343
Ten Mile Estuary SMCA <sup>g</sup>	0.19	N/A	Depth data not available
MacKerricher SMCA <sup>g</sup>	0.72	3.0	0 - 38
Point Cabrillo SMCA <sup>g</sup>	4.29	1.1	0 - 404
Russian Gulch SMCA <sup>g</sup>	4.72	1.2	0 - 402
Big River Estuary SMP <sup>g</sup>	0.22	N/A	Depth data not available
Van Damme SMCA <sup>g</sup>	0.02	0.2	0 - 11
Albion River Estuary SMP <sup>g</sup>	0.05	N/A	Depth data not available
Navarro River Estuary SMCA <sup>g</sup>	0.09	N/A	Depth data not available

<sup>d</sup> Statue mile is the unit of measurement used for this analysis.

<sup>e</sup> Alongshore span measured as direct line from one end of the MPA to the other, roughly paralleling the coastline. An alongshore span is not calculated for estuarine MPAs

<sup>f</sup> Comprehensive bathymetric data for all estuaries is not available. Though bathymetric data do exist in portions of some estuaries, depth ranges are not provided for estuarine MPAs for consistency in evaluations.

<sup>g</sup> Tribal uses are proposed in this MPA. However, pending further policy guidance, these uses are not currently considered in assigning the level of protection for this MPA.

**Table 4. Habitat Representation in External Proposed MPA Array C**

Habitat <sup>h</sup>	SMR		SMRMA		SMP		SMCA		Total MPAs	
	Area	%	Area	%	Area	%	Area	%	Area	%
Intertidal										
Sandy or gravel beach*	0.00	0%	0.00	0%	1.05	1%	17.92	10%	18.98	11%
Rocky shores*	0.00	0%	0.28	<1%	0.82	1%	28.79	18%	29.89	19%
Hardened shores*	0.00	0%	0.00	0%	0.00	0%	0.00	0%	0.00	0%
Coastal marsh*	0.00	0%	1.90	2%	3.55	4%	2.94	3%	8.39	9%
Coastal marsh	0.00	0%	0.04	1%	0.04	1%	0.06	2%	0.14	4%
Tidal flats*	0.00	0%	0.98	1%	0.28	<1%	0.33	<1%	1.59	2%
Seagrass beds										
Humboldt Eelgrass	0.00	0%	0.57	8%	0.00	0%	0.00	0%	0.57	8%
Estuarine										
Estuary	0.00	0%	1.84	4%	0.27	1%	0.28	1%	2.39	6%

*California MLPA North Coast Study Region  
Staff Summary of Area and Habitats in External Proposed MPA Array C  
Date Created: March 5, 2010*

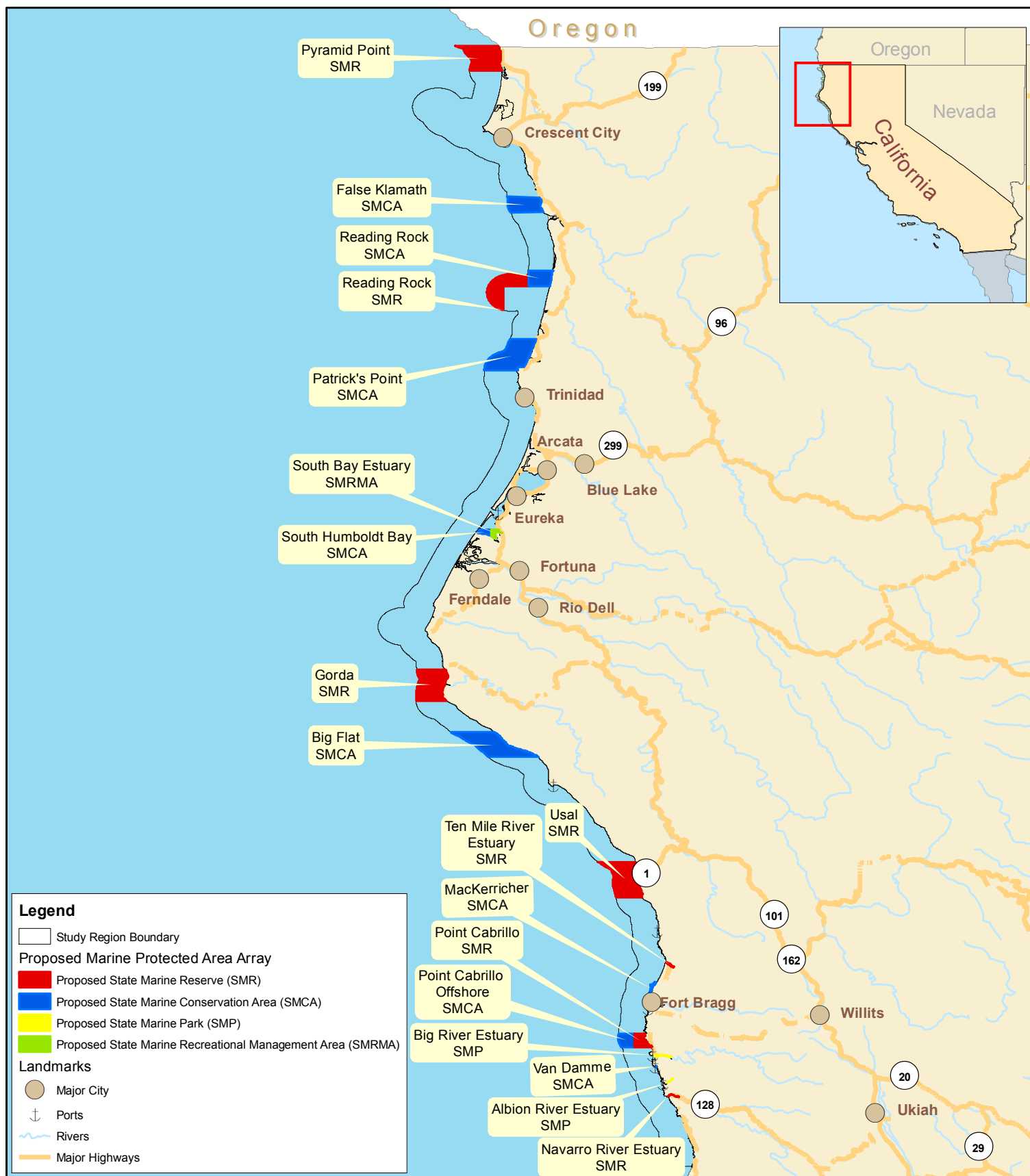
Habitat <sup>h</sup>	SMR		SMRMA		SMP		SMCA		Total MPAs	
	Area	%	Area	%	Area	%	Area	%	Area	%
Hard bottom										
0-30 meters proxy <sup>*,i</sup>	0.00	0%	0.00	0%	0.00	0%	6.68	12%	6.68	12%
0-30 meters	0.00	0%	0.00	0%	0.00	0%	4.91	12%	4.91	12%
30-100 meters	0.00	0%	0.00	0%	0.00	0%	3.68	8%	3.68	8%
100-200 meters	0.00	0%	0.00	0%	0.00	0%	0.31	31%	0.31	31%
>200 meters	0.00	0%	0.00	0%	0.00	0%	0.05	52%	0.05	52%
Soft bottom										
0-30 meters proxy <sup>*,i</sup>	0.00	0%	0.00	0%	0.00	0%	18.94	12%	18.94	12%
0-30 meters	0.00	0%	0.00	0%	0.00	0%	33.70	13%	33.70	13%
30-100 meters	0.00	0%	0.00	0%	0.00	0%	53.89	13%	53.89	13%
100-200 meters	0.00	0%	0.00	0%	0.00	0%	10.56	17%	10.56	17%
>200 meters	0.00	0%	0.00	0%	0.00	0%	2.40	31%	2.40	31%
Unknown										
0-30 meters proxy <sup>*,i</sup>	0.00	0%	0.00	0%	0.00	0%	0.00	0%	0.00	0%
0-30 meters	0.00	0%	1.84	1%	0.25	<1%	9.65	6%	11.73	7%
30-100 meters	0.00	0%	0.00	0%	0.00	0%	0.36	1%	0.36	1%
100-200 meters	0.00	0%	0.00	0%	0.00	0%	0.00	0%	0.00	0%
>200 meters	0.00	0%	0.00	0%	0.00	0%	0.02	10%	0.02	10%
Other										
Offshore rocks*	0.00	0%	0.00	0%	0.00	0%	19.88	14%	19.88	14%
Linear kelp*	0.00	0%	0.00	0%	0.00	0%	6.11	12%	6.11	12%

<sup>h</sup> Note: Habitats are measured as an area (mi<sup>2</sup>) except for those with a \* notation. Habitats with a \* notation are expressed in linear units (mi).

<sup>i</sup> There is limited fine scale data for nearshore habitat, shallower than 10-20 meters depth, in the north coast study region. A proxy for this area was created using a line parallel to the coast and classifying the substrate as either hard or soft substrate depending on the dominant habitat type for the 0-30 meter depth zone in that area based on available fine-scale substrate data, shoreline type, kelp abundance, and expert knowledge.

# MLPA North Coast Study Region

## Round 1- North Coast External Proposed MPA Array D



### California Marine Life Protection Act (MLPA) Initiative

**Projection Information:**  
 Name: NAD 1983 California Teale Albers  
 Projection: Albers  
 Datum: North American 1983

Printing Date: February 17, 2010  
 Created by Marine Map Cartographic Division, UCSB.  
 For more information, visit <http://www.northcoast.marinemap.org/marinemap/>

**California Marine Life Protection Act Initiative**  
**MLPA North Coast Study Region: Round 1 Evaluations**  
**Staff Summary of Area and Habitats in External Proposed MPA Array D**  
*Date Created: March 5, 2010*

**Table 1. Summary of MPAs by Designation for External Proposed MPA Array D**

Type of MPA <sup>a</sup>	# of MPAs	Area (mi <sup>2</sup> )	% of Study Region
State Marine Reserve (SMR)	7	93.16	9.1%
State Marine Recreational Managed Area (SMRMA)	1	1.20	0.1%
State Marine Park (SMP)	2	0.27	<0.1%
State Marine Conservation Area (SMCA)	8	84.09	8.2%
<b>All MPAs combined</b>	<b>18</b>	<b>178.72</b>	<b>17.4%</b>

<sup>a</sup> These are proposed marine protected area (MPA) designations, NOT levels of protection assigned by the MLPA Master Plan Science Advisory Team (SAT). SMRMA is not an MPA designation, but rather a marine managed area designation.

**Table 2. Summary of MPAs by Level of Protection for External Proposed MPA Array D**

Level of Protection (LOP)	# Proposed	Area (mi <sup>2</sup> )	% of Study Region
Very High <sup>b</sup>	8	94.36	9.2%
High	2	5.91	0.6%
Moderate-High	4	76.06	7.4%
Moderate	1	1.60	0.2%
Low <sup>c</sup>	3	0.79	0.1%
<b>Total</b>	<b>18</b>	<b>178.72</b>	<b>17.4%</b>

<sup>b</sup> The "Very High" category includes MPAs with SMR designation, as well as SMRMA designations.

<sup>c</sup> The "Low" category groups together MPAs that are assigned a moderate-low and low level of protection.

**Table 3. Individual MPAs in External Proposed MPA Array D**

MPA Name	Size <sup>d</sup> (mi <sup>2</sup> )	Alongshore Span <sup>e</sup> (mi)	Depth Range <sup>f</sup> (ft)
Pyramid Point SMR <sup>g</sup>	20.99	4.7	0 - 124
False Klamath SMCA <sup>g</sup>	13.14	2.9	0 - 121
Reading Rock SMR <sup>g</sup>	18.64	6.3	90 - 253
Reading Rock SMCA <sup>g</sup>	9.52	3.0	0 - 101
Patrick's Point SMCA <sup>g</sup>	26.70	6.5	0 - 256
South Humboldt Bay SMCA <sup>g</sup>	1.60	N/A	Depth data not available
South Bay Estuary SMRMA <sup>g</sup>	1.20	N/A	Depth data not available
Gorda SMR <sup>g</sup>	22.73	5.8	0 - 1667
Big Flat SMCA <sup>g</sup>	26.71	6.9	0 - 1110
Usal SMR <sup>g</sup>	26.30	6.8	0 - 394
Ten Mile River Estuary SMR <sup>g</sup>	0.18	N/A	Depth data not available
MacKerricher SMCA <sup>g</sup>	0.72	3.0	0 - 38
Point Cabrillo Offshore SMCA	5.69	2.5	276 - 404
Point Cabrillo SMR <sup>g</sup>	4.21	2.5	0 - 306
Big River Estuary SMP <sup>g</sup>	0.22	N/A	Depth data not available
Van Damme SMCA <sup>g</sup>	0.02	0.2	0 - 11
Albion River Estuary SMP <sup>g</sup>	0.05	N/A	Depth data not available
Navarro River Estuary SMR <sup>g</sup>	0.09	N/A	Depth data not available

<sup>d</sup> Statue mile is the unit of measurement used for this analysis.

<sup>e</sup> Alongshore span measured as direct line from one end of the MPA to the other, roughly paralleling the coastline. An alongshore span is not calculated for estuarine MPAs

<sup>f</sup> Comprehensive bathymetric data for all estuaries is not available. Though bathymetric data do exist in portions of some estuaries, depth ranges are not provided for estuarine MPAs for consistency in evaluations.

<sup>g</sup> Tribal uses are proposed in this MPA. However, pending further policy guidance, these uses are not currently considered in assigning the level of protection for this MPA.

**Table 4. Habitat Representation in External Proposed MPA Array D**

Habitat <sup>h</sup>	SMR		SMRMA		SMP		SMCA		Total MPAs	
	Area	%	Area	%	Area	%	Area	%	Area	%
Intertidal										
Sandy or gravel beach*	8.28	5%	0.00	0%	1.05	1%	19.36	11%	28.70	16%
Rocky shores*	19.54	12%	0.00	0%	0.82	1%	8.35	5%	28.71	18%
Hardened shores*	0.00	0%	0.00	0%	0.00	0%	0.00	0%	0.00	0%
Coastal marsh*	2.94	3%	1.29	1%	3.55	4%	1.63	2%	9.40	11%
Coastal marsh	0.06	2%	0.05	2%	0.04	1%	0.04	1%	0.19	5%
Tidal flats*	0.33	<1%	4.79	7%	0.28	<1%	1.08	2%	6.48	10%
Seagrass beds										
Humboldt Eelgrass	0.00	0%	0.08	1%	0.00	0%	0.33	5%	0.40	6%



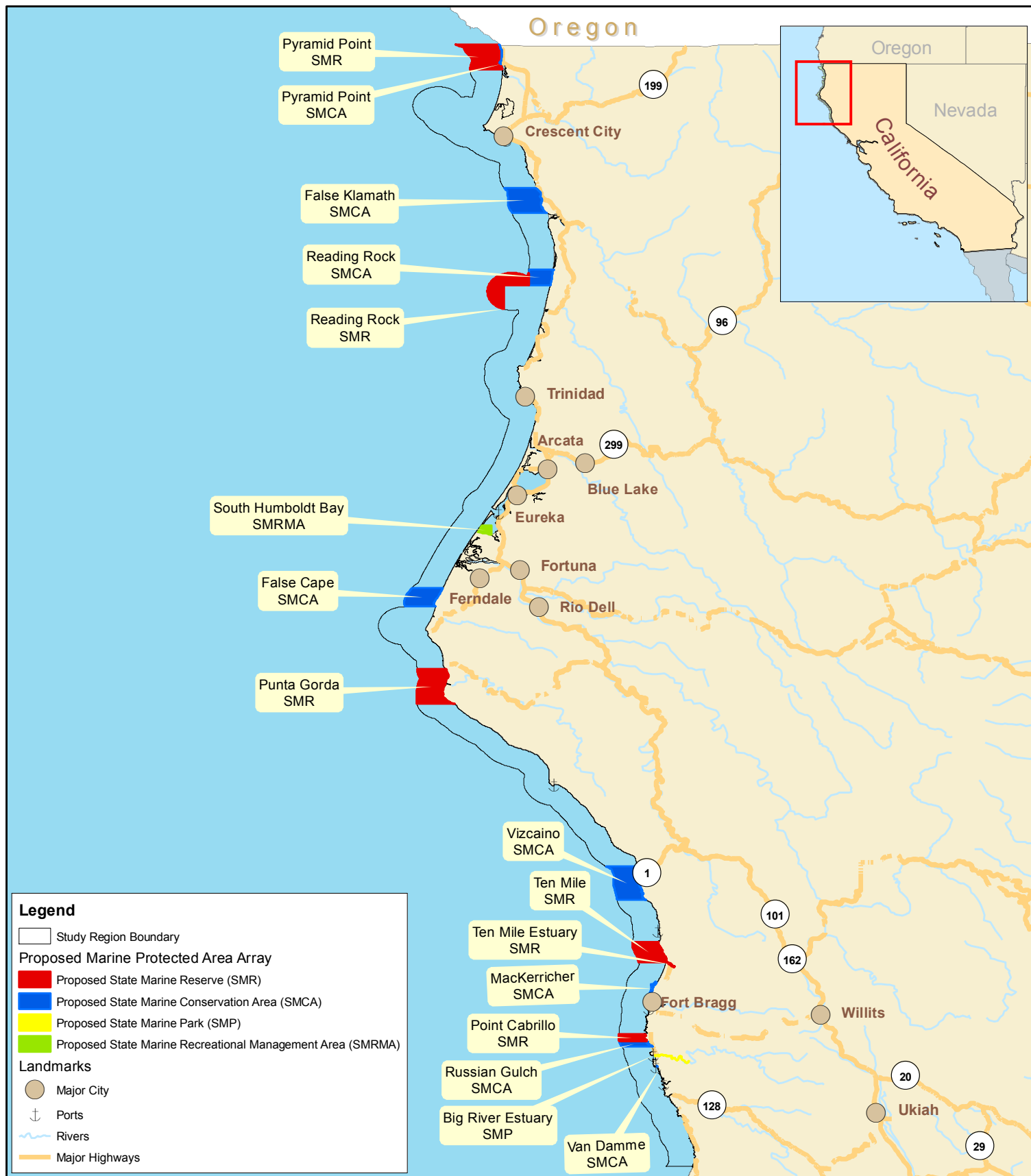
Habitat <sup>h</sup>	SMR		SMRMA		SMP		SMCA		Total MPAs	
	Area	%	Area	%	Area	%	Area	%	Area	%
Estuarine										
Estuary	0.28	1%	1.20	3%	0.27	1%	1.60	4%	3.34	8%
Hard bottom										
0-30 meters proxy <sup>*,i</sup>	6.40	12%	0.00	0%	0.00	0%	1.17	2%	7.58	14%
0-30 meters	4.29	10%	0.00	0%	0.00	0%	1.11	3%	5.40	13%
30-100 meters	2.48	5%	0.00	0%	0.00	0%	0.17	<1%	2.64	6%
100-200 meters	0.27	27%	0.00	0%	0.00	0%	0.06	6%	0.33	33%
>200 meters	0.05	52%	0.00	0%	0.00	0%	0.01	13%	0.06	65%
Soft bottom										
0-30 meters proxy <sup>*,i</sup>	14.00	9%	0.00	0%	0.00	0%	19.18	12%	33.18	21%
0-30 meters	22.20	9%	0.00	0%	0.00	0%	29.81	12%	52.01	21%
30-100 meters	47.30	11%	0.00	0%	0.00	0%	32.35	8%	79.65	19%
100-200 meters	7.09	11%	0.00	0%	0.00	0%	11.16	18%	18.26	29%
>200 meters	2.40	31%	0.00	0%	0.00	0%	0.59	8%	2.98	39%
Unknown										
0-30 meters proxy <sup>*,i</sup>	0.00	0%	0.00	0%	0.00	0%	0.00	0%	0.00	0%
0-30 meters	6.74	4%	1.20	1%	0.25	<1%	8.81	5%	17.00	10%
30-100 meters	0.32	1%	0.00	0%	0.00	0%	0.02	<1%	0.34	1%
100-200 meters	0.00	0%	0.00	0%	0.00	0%	0.00	0%	0.00	0%
>200 meters	0.02	10%	0.00	0%	0.00	0%	0.00	0%	0.02	10%
Other										
Offshore rocks*	12.84	9%	0.00	0%	0.00	0%	5.83	4%	18.67	13%
Linear kelp*	4.74	9%	0.00	0%	0.00	0%	1.97	4%	6.71	13%

<sup>h</sup> Note: Habitats are measured as an area (mi<sup>2</sup>) except for those with a \* notation. Habitats with a \* notation are expressed in linear units (mi).

<sup>i</sup> There is limited fine scale data for nearshore habitat, shallower than 10-20 meters depth, in the north coast study region. A proxy for this area was created using a line parallel to the coast and classifying the substrate as either hard or soft substrate depending on the dominant habitat type for the 0-30 meter depth zone in that area based on available fine-scale substrate data, shoreline type, kelp abundance, and expert knowledge.

# MLPA North Coast Study Region

## Round 1- North Coast External Proposed MPA Array E



### California Marine Life Protection Act (MLPA) Initiative

#### Projection Information:

Name: NAD 1983 California Teale Albers

Projection: Albers

Datum: North American 1983

Printing Date: February 17, 2010

Created by Marine Map Cartographic Division, UCSB.

For more information, visit <http://www.northcoast.marinemap.org/marinemap/>

**California Marine Life Protection Act Initiative**  
**MLPA North Coast Study Region: Round 1 Evaluations**  
**Staff Summary of Area and Habitats in External Proposed MPA Array E**  
*Date Created: March 5, 2010*

**Table 1. Summary of MPAs by Designation for External Proposed MPA Array E**

Type of MPA <sup>a</sup>	# of MPAs	Area (mi <sup>2</sup> )	% of Study Region
State Marine Reserve (SMR)	6	85.55	8.3%
State Marine Recreational Managed Area (SMRMA)	1	2.44	0.2%
State Marine Park (SMP)	1	0.34	0.0%
State Marine Conservation Area (SMCA)	8	74.52	7.3%
<b>All MPAs combined</b>	<b>16</b>	<b>162.84</b>	<b>15.9%</b>

<sup>a</sup> These are proposed marine protected area (MPA) designations, NOT levels of protection assigned by the MLPA Master Plan Science Advisory Team (SAT). SMRMA is not an MPA designation, but rather a marine managed area designation.

**Table 2. Summary of MPAs by Level of Protection for External Proposed MPA Array E**

Level of Protection (LOP)	# Proposed	Area (mi <sup>2</sup> )	% of Study Region
Very High <sup>b</sup>	7	87.99	8.6%
High	1	0.20	0.0%
Moderate-High	5	69.63	6.8%
Moderate	0	0.00	0.0%
Low <sup>c</sup>	3	5.02	0.5%
<b>Total</b>	<b>16</b>	<b>162.84</b>	<b>15.9%</b>

<sup>b</sup> The "Very High" category includes MPAs with SMR designation, as well as SMRMA designations.

<sup>c</sup> The "Low" category groups together MPAs that are assigned a moderate-low and low level of protection.

**Table 3. Individual MPAs in External Proposed MPA Array E**

MPA Name	Size <sup>d</sup> (mi <sup>2</sup> )	Alongshore Span <sup>e</sup> (mi)	Depth Range <sup>f</sup> (ft)
Pyramid Point SMR	20.93	4.7	0 - 124
Pyramid Point SMCA <sup>g</sup>	0.20	3.4	0 - 3
False Klamath SMCA	20.98	4.7	0 - 126
Reading Rock SMR	18.64	6.3	90 - 253
Reading Rock SMCA	9.52	3.0	0 - 101
South Humboldt Bay SMRMA	2.44	N/A	Depth data not available
False Cape SMCA	15.20	3.6	0 - 155
Punta Gorda SMR	25.96	6.4	0 - 1667
Vizcaino SMCA	23.59	6.3	0 - 395
S.E.A. Ten Mile SMR	15.08	3.9	0 - 344
S.E.A. Ten Mile Estuary SMR	0.19	N/A	Depth data not available
MacKerricher SMCA	0.72	3.0	0 - 38
Point Cabrillo SMR	4.76	1.3	0 - 404
Russian Gulch SMCA	4.27	1.1	0 - 402
Big River Estuary SMP	0.34	N/A	Depth data not available
Van Damme SMCA	0.02	0.2	0 - 11

<sup>d</sup> Statue mile is the unit of measurement used for this analysis.

<sup>e</sup> Alongshore span measured as direct line from one end of the MPA to the other, roughly paralleling the coastline. An alongshore span is not calculated for estuarine MPAs

<sup>f</sup> Comprehensive bathymetric data for all estuaries is not available. Though bathymetric data do exist in portions of some estuaries, depth ranges are not provided for estuarine MPAs for consistency in evaluations.

<sup>g</sup> Tribal uses are proposed in this MPA. However, pending further policy guidance, these uses are not currently considered in assigning the level of protection for this MPA.

**Table 4. Habitat Representation in External Proposed MPA Array E**

Habitat <sup>h</sup>	SMR		SMRMA		SMP		SMCA		Total MPAs	
	Area	%	Area	%	Area	%	Area	%	Area	%
Intertidal										
Sandy or gravel beach*	5.43	3%	0.00	0%	1.10	1%	20.27	11%	26.80	15%
Rocky shores*	18.16	11%	0.28	<1%	0.76	<1%	15.29	10%	34.49	22%
Hardened shores*	0.00	0%	0.00	0%	0.00	0%	0.25	1%	0.25	1%
Coastal marsh*	2.30	3%	2.25	3%	3.55	4%	0.00	0%	8.10	9%
Coastal marsh	0.05	1%	0.05	1%	0.05	1%	0.00	0%	0.15	4%
Tidal flats*	0.00	0%	0.86	1%	0.28	<1%	0.00	0%	1.14	2%
Seagrass beds										
Humboldt Eelgrass	0.00	0%	0.92	13%	0.00	0%	0.00	0%	0.92	13%
Estuarine										
Estuary	0.19	<1%	2.44	6%	0.34	1%	0.00	0%	2.96	7%

*California MLPA North Coast Study Region  
Staff Summary of Area and Habitats in External Proposed MPA Array E  
Date Created: March 5, 2010*

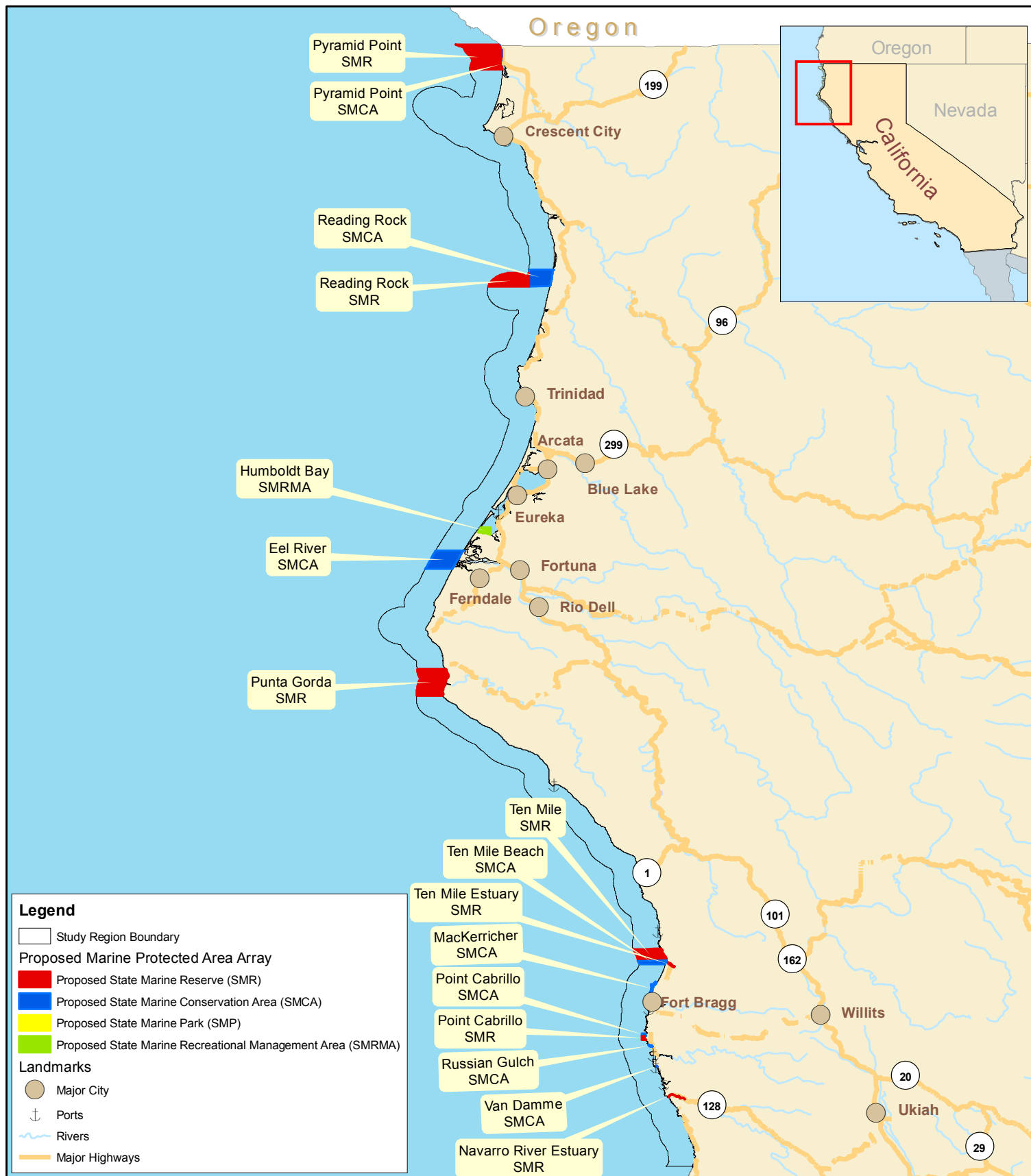
Habitat <sup>h</sup>	SMR		SMRMA		SMP		SMCA		Total MPAs	
	Area	%	Area	%	Area	%	Area	%	Area	%
Hard bottom										
0-30 meters proxy <sup>*,i</sup>	5.00	9%	0.00	0%	0.00	0%	3.97	7%	8.97	17%
0-30 meters	3.43	8%	0.00	0%	0.00	0%	2.83	7%	6.26	15%
30-100 meters	3.74	8%	0.00	0%	0.00	0%	0.25	1%	3.98	9%
100-200 meters	0.31	31%	0.00	0%	0.00	0%	0.00	0%	0.31	32%
>200 meters	0.05	52%	0.00	0%	0.00	0%	0.00	0%	0.05	52%
Soft bottom										
0-30 meters proxy <sup>*,i</sup>	12.15	8%	0.00	0%	0.00	0%	11.91	7%	24.05	15%
0-30 meters	19.16	8%	0.00	0%	0.00	0%	21.70	9%	40.86	16%
30-100 meters	44.08	10%	0.00	0%	0.00	0%	24.38	6%	68.46	16%
100-200 meters	5.76	9%	0.00	0%	0.00	0%	5.77	9%	11.53	18%
>200 meters	2.40	31%	0.00	0%	0.00	0%	0.00	0%	2.40	31%
Unknown										
0-30 meters proxy <sup>*,i</sup>	0.00	0%	0.00	0%	0.00	0%	3.02	16%	3.02	16%
0-30 meters	6.30	4%	2.44	1%	0.20	<1%	10.24	6%	19.18	12%
30-100 meters	0.32	1%	0.00	0%	0.00	0%	9.35	35%	9.66	36%
100-200 meters	0.00	0%	0.00	0%	0.00	0%	0.00	0%	0.00	0%
>200 meters	0.02	10%	0.00	0%	0.00	0%	0.00	0%	0.02	10%
Other										
Offshore rocks*	9.84	7%	0.00	0%	0.00	0%	13.20	9%	23.05	16%
Linear kelp*	4.13	8%	0.00	0%	0.00	0%	3.35	6%	7.48	14%

<sup>h</sup> Note: Habitats are measured as an area (mi<sup>2</sup>) except for those with a \* notation. Habitats with a \* notation are expressed in linear units (mi).

<sup>i</sup> There is limited fine scale data for nearshore habitat, shallower than 10-20 meters depth, in the north coast study region. A proxy for this area was created using a line parallel to the coast and classifying the substrate as either hard or soft substrate depending on the dominant habitat type for the 0-30 meter depth zone in that area based on available fine-scale substrate data, shoreline type, kelp abundance, and expert knowledge.

# MLPA North Coast Study Region

## Round 1- North Coast External Proposed MPA Array F



### California Marine Life Protection Act (MLPA) Initiative

#### Projection Information:

Name: NAD 1983 California Teale Albers

Projection: Albers

Datum: North American 1983

Printing Date: February 17, 2010

Created by Marine Map Cartographic Division, UCSB.

For more information, visit <http://www.northcoast.marinemap.org/marinemap/>

#### Disclaimer:

This map represents a proposed external marine protected area (MPA) array that has been submitted by a north coast community group or groups for consideration in the MLPA planning process. This external MPA array is under review; it is NOT a recommendation to the California Fish and Game Commission.

**California Marine Life Protection Act Initiative**  
**North Coast Study Region: Round 1 Evaluations**  
**Staff Summary of Area and Habitats in External Proposed MPA Array F**  
*Date Created: March 5, 2010*

**Table 1. Summary of MPAs by Designation for External Proposed MPA Array F**

Type of MPA <sup>a</sup>	# of MPAs	Area (mi <sup>2</sup> )	% of Study Region
State Marine Reserve (SMR)	7	61.17	6.0%
State Marine Recreational Managed Area (SMRMA)	1	1.84	0.2%
State Marine Park (SMP)	0	0.00	0.0%
State Marine Conservation Area (SMCA)	8	27.08	2.6%
<b>All MPAs combined</b>	<b>16</b>	<b>90.09</b>	<b>8.8%</b>

<sup>a</sup> These are proposed marine protected area (MPA) designations, NOT levels of protection assigned by the MLPA Master Plan Science Advisory Team (SAT). SMRMA is not an MPA designation, but rather a marine managed area designation.

**Table 2. Summary of MPAs by Level of Protection for External Proposed MPA Array F**

Level of Protection (LOP)	# Proposed	Area (mi <sup>2</sup> )	% of Study Region
Very High <sup>b</sup>	8	63.01	6.1%
High	1	0.20	<0.1%
Moderate-High	3	25.75	2.5%
Moderate	0	0.00	0.0%
Low <sup>c</sup>	4	1.12	0.1%
<b>Total</b>	<b>16</b>	<b>90.09</b>	<b>8.8%</b>

<sup>b</sup> The "Very High" category includes MPAs with SMR designation, as well as SMRMA designations.

<sup>c</sup> The "Low" category groups together MPAs that are assigned a moderate-low and low level of protection.

**Table 3. Individual MPAs in External Proposed MPA Array F**

MPA Name	Size <sup>d</sup> (mi <sup>2</sup> )	Alongshore Span <sup>e</sup> (mi)	Depth Range <sup>f</sup> (ft)
Pyramid Point SMR <sup>g</sup>	20.99	4.7	0 - 124
Pyramid Point SMCA <sup>g</sup>	0.20	3.4	0 - 3
Reading Rock SMR <sup>g</sup>	11.38	2.5	90 - 247
Reading Rock SMCA <sup>g</sup>	9.88	3.1	0 - 101
Humboldt Bay SMRMA <sup>g</sup>	1.84	N/A	Depth data not available
Eel River SMCA <sup>g</sup>	13.20	3.7	0 - 120
Punta Gorda SMR <sup>g</sup>	19.36	4.9	0 - 1667
Ten Mile SMR <sup>g</sup>	8.81	2.3	0 - 335
Ten Mile Beach SMCA <sup>g</sup>	2.67	0.7	0 - 288
Ten Mile Estuary SMR <sup>g</sup>	0.19	N/A	Depth data not available
MacKerricher SMCA <sup>g</sup>	0.72	3.0	0 - 38
Point Cabrillo SMCA <sup>g</sup>	0.29	0.5	0 - 23
Point Cabrillo SMR <sup>g</sup>	0.30	0.7	0 - 40
Russian Gulch SMCA <sup>g</sup>	0.09	0.7	0 - 3
Van Damme SMCA <sup>g</sup>	0.02	0.2	0 - 11
Navarro River Estuary SMR <sup>g</sup>	0.14	N/A	Depth data not available

<sup>d</sup> Statue mile is the unit of measurement used for this analysis.

<sup>e</sup> Alongshore span measured as direct line from one end of the MPA to the other, roughly paralleling the coastline. An alongshore span is not calculated for estuarine MPAs.

<sup>f</sup> Comprehensive bathymetric data for all estuaries is not available. Though bathymetric data do exist in portions of some estuaries, depth ranges are not provided for estuarine MPAs for consistency in evaluations.

<sup>g</sup> Tribal uses are proposed in this MPA. However, pending further policy guidance, these uses are not currently considered in assigning the level of protection for this MPA.

**Table 4. Habitat Representation in External Proposed MPA Array F**

Habitat <sup>h</sup>	SMR		SMRMA		SMP		SMCA		Total MPAs	
	Area	%	Area	%	Area	%	Area	%	Area	%
Intertidal										
Sandy or gravel beach*	5.24	3%	0.00	0%	0.00	0%	13.34	7%	18.59	10%
Rocky shores*	10.59	7%	0.28	<1%	0.00	0%	7.31	5%	18.17	11%
Hardened shores*	0.00	0%	0.00	0%	0.00	0%	0.00	0%	0.00	0%
Coastal marsh*	2.94	3%	1.90	2%	0.00	0%	0.00	0%	4.84	5%
Coastal marsh	0.06	2%	0.04	1%	0.00	0%	0.00	0%	0.10	3%
Tidal flats*	0.36	1%	0.98	1%	0.00	0%	0.00	0%	1.34	2%
Seagrass beds										
Humboldt Eelgrass	0.00	0%	0.57	8%	0.00	0%	0.00	0%	0.57	8%
Estuarine										
Estuary	0.33	1%	1.84	4%	0.00	0%	0.00	0%	2.17	5%



*California MLPA North Coast Study Region  
Staff Summary of Area and Habitats in External Proposed MPA Array F  
Date Created: March 5, 2010*

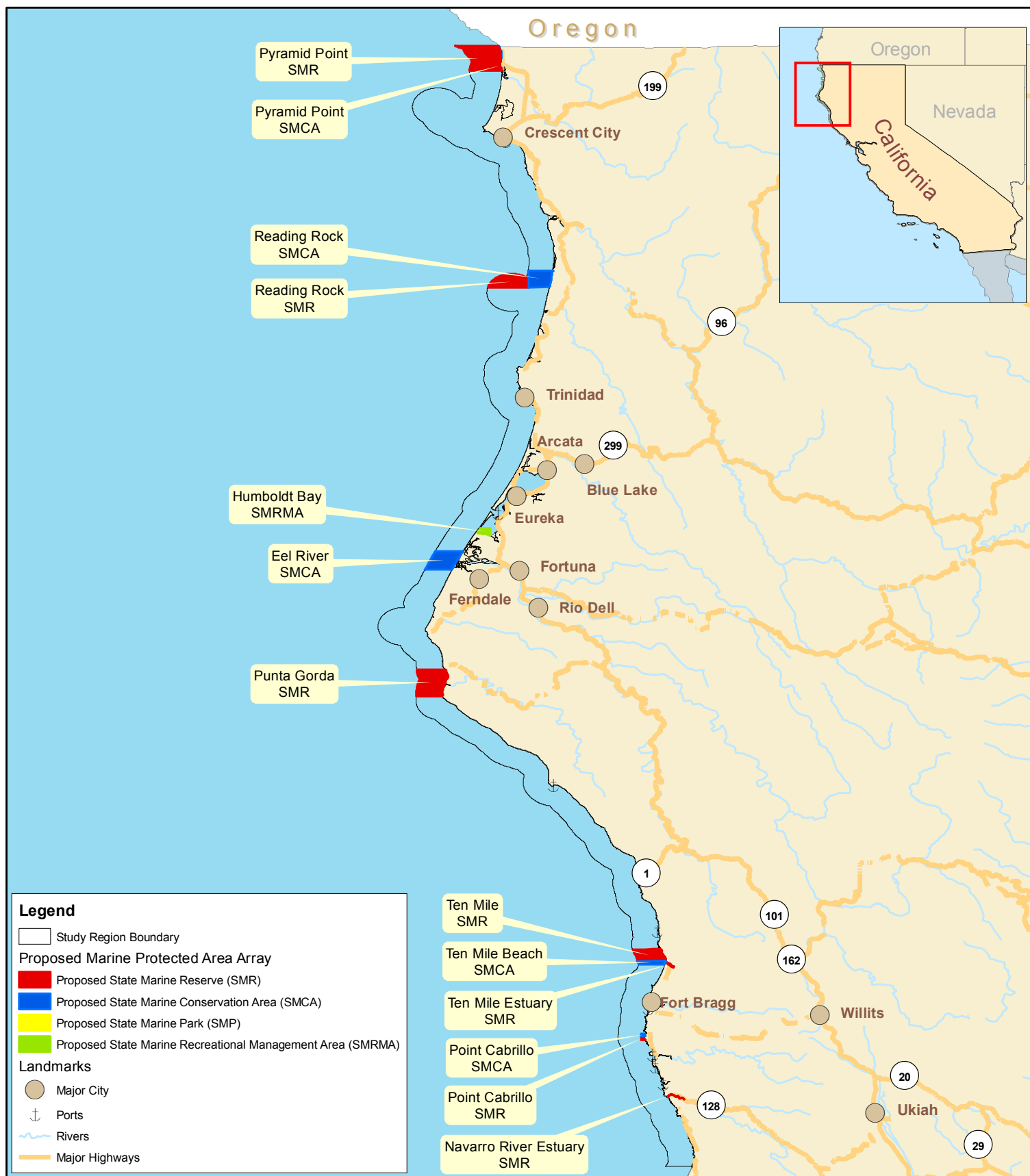
Habitat <sup>h</sup>	SMR		SMRMA		SMP		SMCA		Total MPAs	
	Area	%	Area	%	Area	%	Area	%	Area	%
Hard bottom										
0-30 meters proxy <sup>*,i</sup>	3.10	6%	0.00	0%	0.00	0%	0.00	0%	3.10	6%
0-30 meters	2.52	6%	0.00	0%	0.00	0%	0.23	1%	2.75	7%
30-100 meters	1.66	4%	0.00	0%	0.00	0%	0.00	0%	1.66	4%
100-200 meters	0.23	23%	0.00	0%	0.00	0%	0.00	0%	0.23	23%
>200 meters	0.05	52%	0.00	0%	0.00	0%	0.00	0%	0.05	52%
Soft bottom										
0-30 meters proxy <sup>*,i</sup>	9.46	6%	0.00	0%	0.00	0%	3.84	2%	13.30	8%
0-30 meters	17.85	7%	0.00	0%	0.00	0%	8.80	3%	26.65	11%
30-100 meters	27.75	7%	0.00	0%	0.00	0%	1.97	<1%	29.72	7%
100-200 meters	3.06	5%	0.00	0%	0.00	0%	0.00	0%	3.06	5%
>200 meters	2.40	31%	0.00	0%	0.00	0%	0.00	0%	2.40	31%
Unknown										
0-30 meters proxy <sup>*,i</sup>	0.00	0%	0.00	0%	0.00	0%	3.77	20%	3.77	20%
0-30 meters	5.32	3%	1.84	1%	0.00	0%	15.06	9%	22.22	13%
30-100 meters	0.30	1%	0.00	0%	0.00	0%	1.03	4%	1.33	5%
100-200 meters	0.00	0%	0.00	0%	0.00	0%	0.00	0%	0.00	0%
>200 meters	0.02	10%	0.00	0%	0.00	0%	0.00	0%	0.02	10%
Other										
Offshore rocks*	7.22	5%	0.00	0%	0.00	0%	5.82	4%	13.04	9%
Linear kelp*	2.55	5%	0.00	0%	0.00	0%	0.45	1%	2.99	6%

<sup>h</sup> Note: Habitats are measured as an area (mi<sup>2</sup>) except for those with a \* notation. Habitats with a \* notation are expressed in linear units (mi).

<sup>i</sup> There is limited fine scale data for nearshore habitat, shallower than 10-20 meters depth, in the north coast study region. A proxy for this area was created using a line parallel to the coast and classifying the substrate as either hard or soft substrate depending on the dominant habitat type for the 0-30 meter depth zone in that area based on available fine-scale substrate data, shoreline type, kelp abundance, and expert knowledge.

# MLPA North Coast Study Region

## Round 1- North Coast External Proposed MPA Array G



### California Marine Life Protection Act (MLPA) Initiative

#### Projection Information:

Name: NAD 1983 California Teale Albers

Projection: Albers

Datum: North American 1983

Printing Date: February 16, 2010

Created by Marine Map Cartographic Division, UCSB.

For more information, visit <http://www.northcoast.marinemap.org/marinemap/>

**California Marine Life Protection Act Initiative**  
**MLPA North Coast Study Region: Round 1 Evaluations**  
**Staff Summary of Area and Habitats in External Proposed MPA Array G**  
*Date Created: March 5, 2010*

**Table 1. Summary of MPAs by Designation for External Proposed MPA Array G**

Type of MPA <sup>a</sup>	# of MPAs	Area (mi <sup>2</sup> )	% of Study Region
State Marine Reserve (SMR)	7	61.17	6.0%
State Marine Recreational Managed Area (SMRMA)	1	1.84	0.2%
State Marine Park (SMP)	0	0.00	0.0%
State Marine Conservation Area (SMCA)	5	26.24	2.6%
<b>All MPAs combined</b>	<b>13</b>	<b>89.25</b>	<b>8.7%</b>

<sup>a</sup> These are proposed marine protected area (MPA) designations, NOT levels of protection assigned by the MLPA Master Plan Science Advisory Team (SAT). SMRMA is not an MPA designation, but rather a marine managed area designation.

**Table 2. Summary of MPAs by Level of Protection for External Proposed MPA Array G**

Level of Protection (LOP)	# Proposed	Area (mi <sup>2</sup> )	% of Study Region
Very High <sup>b</sup>	8	63.01	6.1%
High	1	0.20	0.0%
Moderate-High	3	25.75	2.5%
Moderate	0	0.00	0.0%
Low <sup>c</sup>	1	0.29	<0.1%
<b>Total</b>	<b>13</b>	<b>89.25</b>	<b>8.7%</b>

<sup>b</sup> The "Very High" category includes MPAs with SMR designation, as well as SMRMA designations.

<sup>c</sup> The "Low" category groups together MPAs that are assigned a moderate-low and low level of protection.

**Table 3. Individual MPAs in External Proposed MPA Array G**

MPA Name	Size <sup>d</sup> (mi <sup>2</sup> )	Alongshore Span <sup>e</sup> (mi)	Depth Range <sup>f</sup> (ft)
Pyramid Point SMR <sup>g</sup>	20.99	4.7	0 - 124
Pyramid Point SMCA <sup>g</sup>	0.20	3.4	0 - 3
Reading Rock SMR <sup>g</sup>	11.38	2.5	90 - 247
Reading Rock SMCA <sup>g</sup>	9.88	3.1	0 - 101
Humboldt Bay SMRMA <sup>g</sup>	1.84	N/A	Depth data not available
Eel River SMCA <sup>g</sup>	13.20	3.7	0 - 120
Punta Gorda SMR <sup>g</sup>	19.36	4.9	0 - 1667
Ten Mile SMR <sup>g</sup>	8.81	2.3	0 - 335
Ten Mile Beach SMCA <sup>g</sup>	2.67	0.7	0 - 288
Ten Mile Estuary SMR <sup>g</sup>	0.19	N/A	Depth data not available
Point Cabrillo SMCA <sup>g</sup>	0.29	0.5	0 - 23
Point Cabrillo SMR <sup>g</sup>	0.30	0.7	0 - 40
Navarro River Estuary SMR <sup>g</sup>	0.14	N/A	Depth data not available

<sup>d</sup> Statue mile is the unit of measurement used for this analysis.

<sup>e</sup> Alongshore span measured as direct line from one end of the MPA to the other, roughly paralleling the coastline. An alongshore span is not calculated for estuarine MPAs

<sup>f</sup> Comprehensive bathymetric data for all estuaries is not available. Though bathymetric data do exist in portions of some estuaries, depth ranges are not provided for estuarine MPAs for consistency in evaluations.

<sup>g</sup> Tribal uses are proposed in this MPA. However, pending further policy guidance, these uses are not currently considered in assigning the level of protection for this MPA.

**Table 4. Habitat Representation in External Proposed MPA Array G**

Habitat <sup>h</sup>	SMR		SMRMA		SMP		SMCA		Total MPAs	
	Area	%	Area	%	Area	%	Area	%	Area	%
Intertidal										
Sandy or gravel beach*	5.24	3%	0.00	0%	0.00	0%	11.43	6%	16.67	9%
Rocky shores*	10.59	7%	0.28	<1%	0.00	0%	2.16	1%	13.02	8%
Hardened shores*	0.00	0%	0.00	0%	0.00	0%	0.00	0%	0.00	0%
Coastal marsh*	2.94	3%	1.90	2%	0.00	0%	0.00	0%	4.84	5%
Coastal marsh	0.06	2%	0.04	1%	0.00	0%	0.00	0%	0.10	3%
Tidal flats*	0.36	1%	0.98	1%	0.00	0%	0.00	0%	1.34	2%
Seagrass beds										
Humboldt Eelgrass	0.00	0%	0.57	8%	0.00	0%	0.00	0%	0.57	8%
Estuarine										
Estuary	0.33	1%	1.84	4%	0.00	0%	0.00	0%	2.17	5%
Hard bottom										
0-30 meters proxy <sup>*,i</sup>	3.10	6%	0.00	0%	0.00	0%	0.00	0%	3.10	6%
0-30 meters	2.52	6%	0.00	0%	0.00	0%	0.12	<1%	2.64	6%

*California MLPA North Coast Study Region  
Staff Summary of Area and Habitats in External Proposed MPA Array G  
Date Created: March 5, 2010*

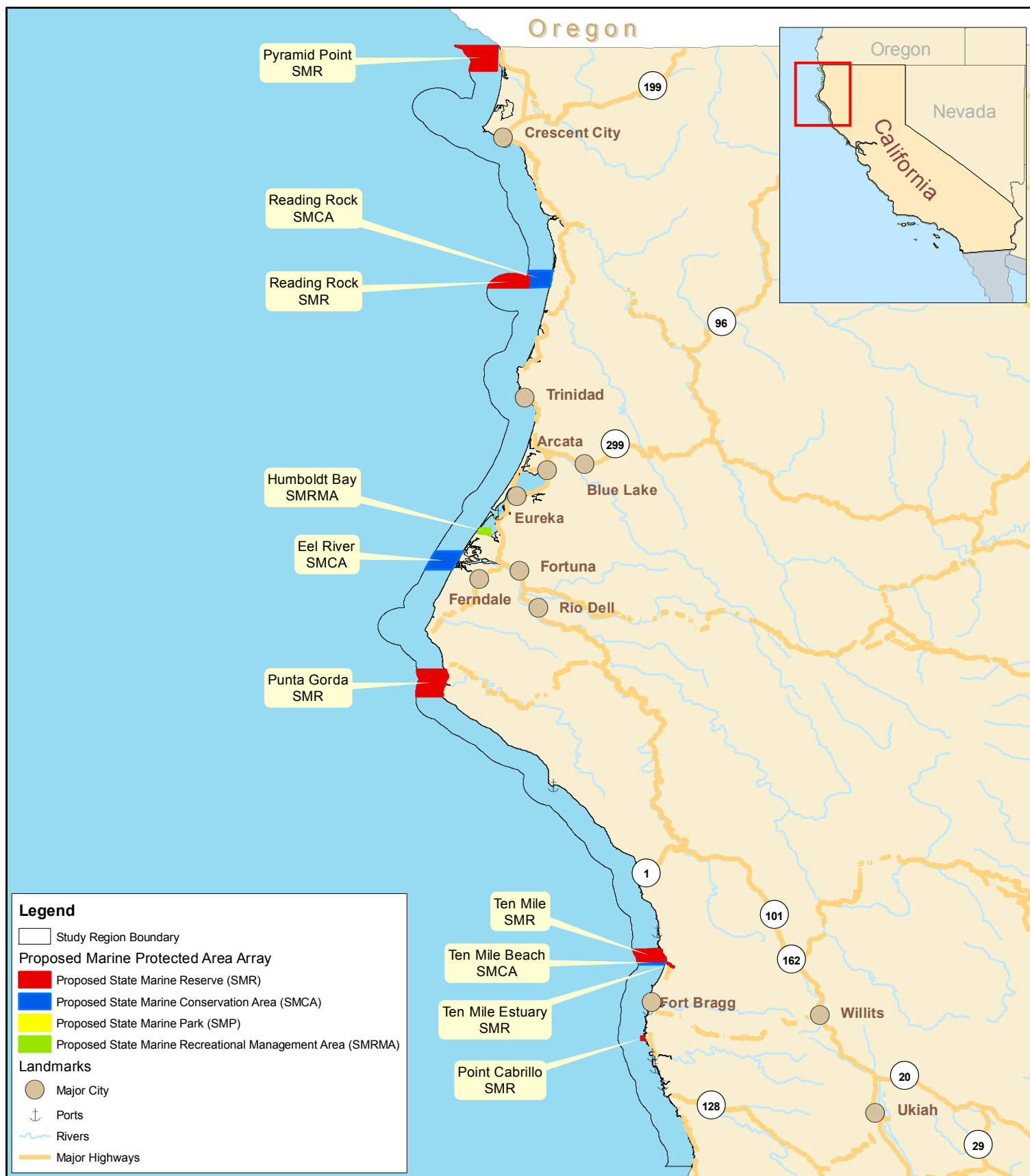
Habitat <sup>h</sup>	SMR		SMRMA		SMP		SMCA		Total MPAs	
	Area	%	Area	%	Area	%	Area	%	Area	%
30-100 meters	1.66	4%	0.00	0%	0.00	0%	0.00	0%	1.66	4%
100-200 meters	0.23	23%	0.00	0%	0.00	0%	0.00	0%	0.23	23%
>200 meters	0.05	52%	0.00	0%	0.00	0%	0.00	0%	0.05	52%
Soft bottom										
0-30 meters proxy*, <sup>i</sup>	9.46	6%	0.00	0%	0.00	0%	3.84	2%	13.30	8%
0-30 meters	17.85	7%	0.00	0%	0.00	0%	8.76	3%	26.61	11%
30-100 meters	27.75	7%	0.00	0%	0.00	0%	1.97	0%	29.72	7%
100-200 meters	3.06	5%	0.00	0%	0.00	0%	0.00	0%	3.06	5%
>200 meters	2.40	31%	0.00	0%	0.00	0%	0.00	0%	2.40	31%
Unknown										
0-30 meters proxy*, <sup>i</sup>	0.00	0%	0.00	0%	0.00	0%	3.77	20%	3.77	20%
0-30 meters	5.32	3%	1.84	1%	0.00	0%	14.37	9%	21.53	13%
30-100 meters	0.30	1%	0.00	0%	0.00	0%	1.03	4%	1.33	5%
100-200 meters	0.00	0%	0.00	0%	0.00	0%	0.00	0%	0.00	0%
>200 meters	0.02	10%	0.00	0%	0.00	0%	0.00	0%	0.02	10%
Other										
Offshore rocks*	7.22	5%	0.00	0%	0.00	0%	1.25	1%	8.46	6%
Linear kelp*	2.55	5%	0.00	0%	0.00	0%	0.45	1%	2.99	6%

<sup>h</sup> Note: Habitats are measured as an area (mi<sup>2</sup>) except for those with a \* notation. Habitats with a \* notation are expressed in linear units (mi).

<sup>i</sup> There is limited fine scale data for nearshore habitat, shallower than 10-20 meters depth, in the north coast study region. A proxy for this area was created using a line parallel to the coast and classifying the substrate as either hard or soft substrate depending on the dominant habitat type for the 0-30 meter depth zone in that area based on available fine-scale substrate data, shoreline type, kelp abundance, and expert knowledge.

# MLPA North Coast Study Region

## Round 1- North Coast External Proposed MPA Array H



### California Marine Life Protection Act (MLPA) Initiative

**Projection Information:**  
 Name: NAD 1983 California Teale Albers  
 Projection: Albers  
 Datum: North American 1983

Printing Date: February 16, 2010  
 Created by Marine Map Cartographic Division, UCSB.

For more information, visit <http://www.northcoast.marinemap.org/marinemap/>

**California Marine Life Protection Act Initiative**  
**MLPA North Coast Study Region: Round 1 Evaluations**  
**Staff Summary of Area and Habitats in External Proposed MPA Array H**  
*Date Created: March 5, 2010*

**Table 1. Summary of MPAs by Designation for External Proposed MPA Array H**

Type of MPA <sup>a</sup>	# of MPAs	Area (mi <sup>2</sup> )	% of Study Region
State Marine Reserve (SMR)	6	58.93	5.7%
State Marine Recreational Managed Area (SMRMA)	1	1.84	0.2%
State Marine Park (SMP)	0	0.00	0.0%
State Marine Conservation Area (SMCA)	3	25.75	2.5%
<b>All MPAs combined</b>	<b>10</b>	<b>86.52</b>	<b>8.4%</b>

<sup>a</sup> These are proposed marine protected area (MPA) designations, NOT levels of protection assigned by the MLPA Master Plan Science Advisory Team (SAT). SMRMA is not an MPA designation, but rather a marine managed area designation.

**Table 2. Summary of MPAs by Level of Protection for External Proposed MPA Array H**

Level of Protection (LOP)	# Proposed	Area (mi <sup>2</sup> )	% of Study Region
Very High <sup>b</sup>	7	60.77	5.9%
High	0	0.00	0.0%
Moderate-High	3	25.75	2.5%
Moderate	0	0.00	0.0%
Low <sup>c</sup>	0	0.00	0.0%
<b>Total</b>	<b>10</b>	<b>86.52</b>	<b>8.4%</b>

<sup>b</sup> The "Very High" category includes MPAs with SMR designation, as well as SMRMA designations.

<sup>c</sup> The "Low" category groups together MPAs that are assigned a moderate-low and low level of protection.

**Table 3. Individual MPAs in External Proposed MPA Array H**

MPA Name	Size <sup>d</sup> (mi <sup>2</sup> )	Alongshore Span <sup>e</sup> (mi)	Depth Range <sup>f</sup> (ft)
Pyramid Point SMR <sup>g</sup>	18.89	4.7	11 - 124
Reading Rock SMR <sup>g</sup>	11.38	2.5	90 - 247
Reading Rock SMCA <sup>g</sup>	9.88	3.1	0 - 101
Humboldt Bay SMRMA <sup>g</sup>	1.84	N/A	Depth data not available
Eel River SMCA <sup>g</sup>	13.20	3.7	0 - 120
Punta Gorda SMR <sup>g</sup>	19.36	4.9	0 - 1667
Ten Mile SMR <sup>g</sup>	8.81	2.3	0 - 335
Ten Mile Beach SMCA <sup>g</sup>	2.67	0.7	0 - 288
Ten Mile Estuary SMR <sup>g</sup>	0.19	N/A	Depth data not available
Point Cabrillo SMR <sup>g</sup>	0.30	0.7	0 - 40

<sup>d</sup> Statue mile is the unit of measurement used for this analysis.

<sup>e</sup> Alongshore span measured as direct line from one end of the MPA to the other, roughly paralleling the coastline. An alongshore span is not calculated for estuarine MPAs

<sup>f</sup> Comprehensive bathymetric data for all estuaries is not available. Though bathymetric data do exist in portions of some estuaries, depth ranges are not provided for estuarine MPAs for consistency in evaluations.

<sup>g</sup> Tribal uses are proposed in this MPA. However, pending further policy guidance, these uses are not currently considered in assigning the level of protection for this MPA.

**Table 4. Habitat Representation in External Proposed MPA Array H**

Habitat <sup>h</sup>	SMR		SMRMA		SMP		SMCA		Total MPAs	
	Area	%	Area	%	Area	%	Area	%	Area	%
Intertidal										
Sandy or gravel beach*	4.92	3%	0.00	0%	0.00	0%	7.65	4%	12.58	7%
Rocky shores*	8.83	6%	0.28	<1%	0.00	0%	0.02	<1%	9.13	6%
Hardened shores*	0.00	0%	0.00	0%	0.00	0%	0.00	0%	0.00	0%
Coastal marsh*	2.30	3%	1.90	2%	0.00	0%	0.00	0%	4.20	5%
Coastal marsh	0.05	1%	0.04	1%	0.00	0%	0.00	0%	0.09	3%
Tidal flats*	0.00	0%	0.98	1%	0.00	0%	0.00	0%	0.98	1%
Seagrass beds										
Humboldt Eelgrass	0.00	0%	0.57	8%	0.00	0%	0.00	0%	0.57	8%
Estuarine										
Estuary	0.19	<1%	1.84	4%	0.00	0%	0.00	0%	2.03	5%
Hard bottom										
0-30 meters proxy <sup>*.i</sup>	3.10	6%	0.00	0%	0.00	0%	0.00	0%	3.10	6%
0-30 meters	2.51	6%	0.00	0%	0.00	0%	0.00	0%	2.51	6%
30-100 meters	1.66	4%	0.00	0%	0.00	0%	0.00	0%	1.66	4%
100-200 meters	0.23	23%	0.00	0%	0.00	0%	0.00	0%	0.23	23%
>200 meters	0.05	52%	0.00	0%	0.00	0%	0.00	0%	0.05	52%

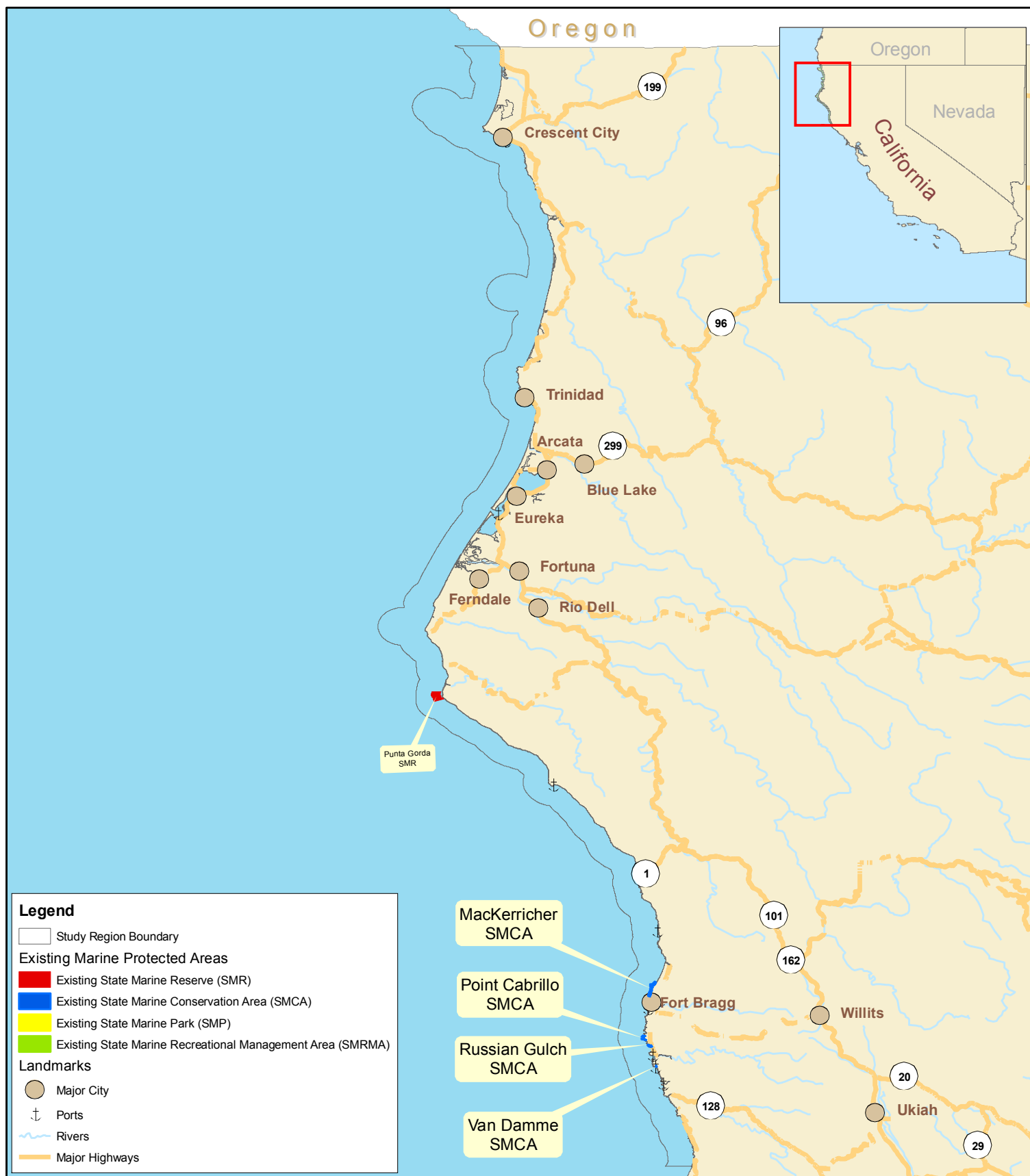


Habitat <sup>h</sup>	SMR		SMRMA		SMP		SMCA		Total MPAs	
	Area	%	Area	%	Area	%	Area	%	Area	%
Soft bottom										
0-30 meters proxy <sup>*, i</sup>	9.45	6%	0.00	0%	0.00	0%	3.84	2%	13.29	8%
0-30 meters	17.77	7%	0.00	0%	0.00	0%	8.75	3%	26.52	11%
30-100 meters	27.76	7%	0.00	0%	0.00	0%	1.97	<1%	29.73	7%
100-200 meters	3.06	5%	0.00	0%	0.00	0%	0.00	0%	3.06	5%
>200 meters	2.40	31%	0.00	0%	0.00	0%	0.00	0%	2.40	31%
Unknown										
0-30 meters proxy <sup>*, i</sup>	0.00	0%	0.00	0%	0.00	0%	3.77	20%	3.77	20%
0-30 meters	3.19	2%	1.84	1%	0.00	0%	14.01	8%	19.04	12%
30-100 meters	0.30	1%	0.00	0%	0.00	0%	1.03	4%	1.33	5%
100-200 meters	0.00	0%	0.00	0%	0.00	0%	0.00	0%	0.00	0%
>200 meters	0.02	10%	0.00	0%	0.00	0%	0.00	0%	0.02	10%
Other										
Offshore rocks*	5.00	4%	0.00	0%	0.00	0%	0.01	<1%	5.01	4%
Linear kelp*	2.55	5%	0.00	0%	0.00	0%	0.00	0%	2.55	5%

<sup>h</sup> Note: Habitats are measured as an area (mi<sup>2</sup>) except for those with a \* notation. Habitats with a \* notation are expressed in linear units (mi).

<sup>i</sup> There is limited fine scale data for nearshore habitat, shallower than 10-20 meters depth, in the north coast study region. A proxy for this area was created using a line parallel to the coast and classifying the substrate as either hard or soft substrate depending on the dominant habitat type for the 0-30 meter depth zone in that area based on available fine-scale substrate data, shoreline type, kelp abundance, and expert knowledge.

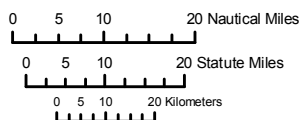
# MLPA North Coast Study Region Existing Marine Protected Areas



## California Marine Life Protection Act (MLPA) Initiative

### Projection Information:

Name: NAD 1983 California Teale Albers  
Projection: Albers  
Datum: North American 1983



Printing Date: February 26, 2010  
Created by Marine Map Cartographic Division, UCSB.

For more information, visit <http://www.northcoast.marinemap.org/marinemap/>

### Disclaimer:

This map represents a proposed external marine protected area (MPA) array that has been submitted by a north coast community group or groups for consideration in the MLPA planning process. This external MPA array is under review; it is NOT a recommendation to the California Fish and Game Commission.

**California Marine Life Protection Act Initiative**  
**MLPA North Coast Study Region: Round 1 Evaluations**  
**Staff Summary of Area and Habitats in Proposal 0 (Existing MPAs)**  
*Date Created: March 5, 2010*

**Table 1. Summary of MPAs by Designation for Proposal 0 (Existing MPAs)**

Type of MPA <sup>a</sup>	# of MPAs	Area (mi <sup>2</sup> )	% of Study Region
State Marine Reserve (SMR)	1	2.07	0.2%
State Marine Recreational Managed Area (SMRMA)	0	0.00	0.0%
State Marine Park (SMP)	0	0.00	0.0%
State Marine Conservation Area (SMCA)	4	1.06	0.1%
<b>All MPAs combined</b>	<b>5</b>	<b>3.13</b>	<b>0.3%</b>

<sup>a</sup> These are proposed marine protected area (MPA) designations, NOT levels of protection assigned by the MLPA Master Plan Science Advisory Team (SAT). SMRMA is not an MPA designation, but rather a marine managed area designation.

**Table 2. Summary of MPAs by Level of Protection for Proposal 0 (Existing MPAs)**

Level of Protection (LOP)	# Proposed	Area (mi <sup>2</sup> )	% of Study Region
Very High <sup>b</sup>	1	2.07	0.2%
High	0	0.00	0.0%
Moderate-High	0	0.00	0.0%
Moderate	0	0.00	0.0%
Low <sup>c</sup>	4	1.06	0.1%
<b>Total</b>	<b>5</b>	<b>3.13</b>	<b>0.3%</b>

<sup>b</sup> The "Very High" category includes MPAs with SMR designation, as well as SMRMA designations.

<sup>c</sup> The "Low" category groups together MPAs that are assigned a moderate-low and low level of protection.

**Table 3. Individual MPAs in Proposal 0 (Existing MPAs)**

MPA Name	Size <sup>d</sup> (mi <sup>2</sup> )	Alongshore Span <sup>e</sup> (mi)	Depth Range <sup>f</sup> (ft)
Punta Gorda SMR	2.07	1.6	15 - 184
MacKerricher SMCA	0.72	3.0	0 - 38
Point Cabrillo SMCA	0.22	0.9	0 - 20
Russian Gulch SMCA	0.09	0.7	0 - 3
Van Damme SMCA	0.02	0.2	0 - 11

<sup>d</sup> Statue mile is the unit of measurement used for this analysis.

<sup>e</sup> Alongshore span measured as direct line from one end of the MPA to the other, roughly paralleling the coastline. An alongshore span is not calculated for estuarine MPAs

<sup>f</sup> Comprehensive bathymetric data for all estuaries is not available. Though bathymetric data do exist in portions of some estuaries, depth ranges are not provided for estuarine MPAs for consistency in evaluations.

**Table 4. Habitat Representation in Proposal 0 (Existing MPAs)**

Habitat <sup>g</sup>	SMR		SMRMA		SMP		SMCA		Total MPAs	
	Area	%	Area	%	Area	%	Area	%	Area	%
Intertidal										
Sandy or gravel beach*	0.00	0%	0.00	0%	0.00	0%	1.92	1%	1.92	1%
Rocky shores*	0.00	0%	0.00	0%	0.00	0%	7.84	5%	7.84	5%
Hardened shores*	0.00	0%	0.00	0%	0.00	0%	0.00	0%	0.00	0%
Coastal marsh*	0.00	0%	0.00	0%	0.00	0%	0.00	0%	0.00	0%
Coastal marsh	0.00	0%	0.00	0%	0.00	0%	0.00	0%	0.00	0%
Tidal flats*	0.00	0%	0.00	0%	0.00	0%	0.00	0%	0.00	0%
Seagrass beds										
Humboldt Eelgrass	0.00	0%	0.00	0%	0.00	0%	0.00	0%	0.00	0%
Estuarine										
Estuary	0.00	0%	0.00	0%	0.00	0%	0.00	0%	0.00	0%
Hard bottom										
0-30 meters proxy*, <sup>h</sup>	0.81	2%	0.00	0%	0.00	0%	0.00	0%	0.81	2%
0-30 meters	0.40	1%	0.00	0%	0.00	0%	0.19	<1%	0.59	1%
30-100 meters	0.26	1%	0.00	0%	0.00	0%	0.00	0%	0.26	1%
100-200 meters	0.00	0%	0.00	0%	0.00	0%	0.00	0%	0.00	0%
>200 meters	0.00	0%	0.00	0%	0.00	0%	0.00	0%	0.00	0%
Soft bottom										
0-30 meters proxy*, <sup>h</sup>	0.77	<1%	0.00	0%	0.00	0%	0.00	0%	0.77	<1%
0-30 meters	0.31	<1%	0.00	0%	0.00	0%	0.05	<1%	0.36	<1%
30-100 meters	1.00	<1%	0.00	0%	0.00	0%	0.00	0%	1.00	<1%
100-200 meters	0.00	0%	0.00	0%	0.00	0%	0.00	0%	0.00	0%

Habitat <sup>g</sup>	SMR		SMRMA		SMP		SMCA		Total MPAs	
	Area	%	Area	%	Area	%	Area	%	Area	%
>200 meters	0.00	0%	0.00	0%	0.00	0%	0.00	0%	0.00	0%
Unknown										
0-30 meters proxy*, <sup>h</sup>	0.00	0%	0.00	0%	0.00	0%	0.00	0%	0.00	0%
0-30 meters	0.10	<1%	0.00	0%	0.00	0%	0.82	<1%	0.92	1%
30-100 meters	0.00	0%	0.00	0%	0.00	0%	0.00	0%	0.00	0%
100-200 meters	0.00	0%	0.00	0%	0.00	0%	0.00	0%	0.00	0%
>200 meters	0.00	0%	0.00	0%	0.00	0%	0.00	0%	0.00	0%
Other										
Offshore rocks*	0.00	0%	0.00	0%	0.00	0%	6.23	4%	6.23	4%
Linear kelp*	0.00	0%	0.00	0%	0.00	0%	0.23	<1%	0.23	<1%

<sup>g</sup> Note: Habitats are measured as an area (mi<sup>2</sup>) except for those with a \* notation. Habitats with a \* notation are expressed in linear units (mi).

<sup>h</sup> There is limited fine scale data for nearshore habitat, shallower than 10-20 meters depth, in the north coast study region. A proxy for this area was created using a line parallel to the coast and classifying the substrate as either hard or soft substrate depending on the dominant habitat type for the 0-30 meter depth zone in that area based on available fine-scale substrate data, shoreline type, kelp abundance, and expert knowledge.